

Document No.: 042858-0148

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of : Customer Number: 20277  
Craig HANSEN, et al. : Confirmation Number: 9134  
Application No.: 10/712,430 : Group Art Unit: 2183  
Filed: November 14, 2003 : Examiner: CHAN, EDDIE P  
For: SYSTEM AND SOFTWARE FOR CATENATED GROUP SHIFT INSTRUCTION

**TRANSMITTAL**

Mail Stop Ex Partes Reexam  
Central Reexamination Unit  
Office of Patent Legal Administration  
United States Patent & Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Transmitted herewith is an Information Disclosure Statement in the above-identified application.



No additional fee is required.

Applicant is entitled to small entity status under 37 CFR 1.27

Also attached: Form 1449 (references in hard copy and on CD-ROM) and  
Notice of Concurrent Proceedings



Please charge my Deposit Account No. 500417 in the amount of \$0.00. An additional copy of this transmittal sheet is submitted herewith.



The Commissioner is hereby authorized to charge payment of any fees associated with this communication or credit any overpayment, to Deposit Account No. 500417, including any filing fees under 37 CFR 1.16 for presentation of extra claims and any patent application processing fees under 37 CFR 1.17.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

Kenneth L. Cage  
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Facsimile: 202.756.8087  
Date: January 30, 2006

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Docket No. 043876-014

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Craig HANSEN, et al.	:	Confirmation Number: 9134
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	:	
Filed: November 14, 2003	:	Examiner: CHAN, EDDIE P
	:	
For: SYSTEM AND SOFTWARE FOR CATENATED GROUP SHIFT INSTRUCTION		

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In accordance with the provisions of 37 C.F.R. 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the documents listed on the attached form PTO-1449. It is respectfully requested that the documents be expressly considered during the prosecution of this application, and that the documents be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

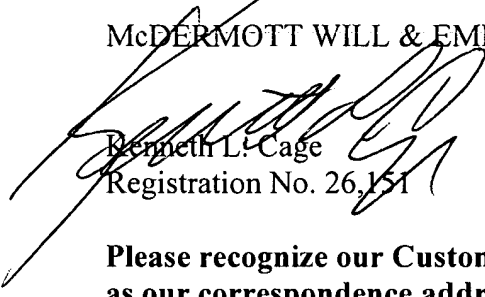
This Information Disclosure Statement is being filed within three months of the U.S. filing date OR before the mailing date of a first Office Action on the merits. No certification or fee is required.

10/712,430

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



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Substitute for form 1449A/PTO			<b>Complete if Known</b>		
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			Application Number	10/712,430	
			Filing Date	November 14, 2003	
			First Named Inventor	Craig C. HANSEN, et al.	
			Group Art Unit	2183	
			Examiner Name	CHAN, EDDIE P	
			Attorney Docket Number	43876-148	
Sheet	1	of	10		

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	AA	US-4,852,098	07/25/1989	Brechard, et al.	
	AB	US-4,875,161	10/17/1989	Lahti, et al.	
	AC	US-4,949,294	08/14/1990	Wambergue, et al.	
	AD	US-4,953,073	08/28/1990	Moussouris, et al.	
	AE	US-4,959,779	09/25/1990	Weber, et al.	
	AF	US-5,081,698	01/14/1992	Kohn	
	AG	US-5,113,506	05/12/1992	Moussouris, et al.	
	AH	US-5,155,816	10/13/1992	Kohn	
	AI	US-5,161,247	11/03/1992	Murakami, et al.	
	AJ	US-5,179,651	01/12/1993	Taaffe, et al.	
	AK	US-5,231,646	07/27/1993	Heath, et al.	
	AL	US-5,233,690	08/03/1993	Sherlock, et al.	
	AM	US-5,241,636	08/31/1993	Kohn	
	AN	US-5,280,598	01/18/1994	Osaki, et al.	
	AO	US-5,487,024	01/23/1996	Girardeau, Jr.	
	AP	US-5,515,520	05/07/1996	Hatta, et al.	
	AQ	US-5,533,185	07/02/1996	Lentz, et al.	
	AR	US-5,590,365	12/31/1996	Ide, et al.	
	AS	US-5,600,814	02/04/1997	Gahan, et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	AT	WO 93/11500				

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Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>			<b>Complete if Known</b>		
			Application Number	10/712,430	
			Filing Date	November 14, 2003	
			First Named Inventor	Craig C. HANSEN, et al.	
			Group Art Unit	2183	
			Examiner Name	CHAN, EDDIE P	
Sheet	2	of	10	Attorney Docket Number	43876-148

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T <sup>2</sup>
	AU	IEEE Draft Standard for "Scalable Coherent Interface-Low-Voltage Differential Signal Specifications and Packet Encoding", IEEE Standards Department, P1596.3/D0.15 (Mar. 1992) (50006DOC018530 - 563)	
	AV	IEEE Draft Standard for "High-Bandwidth Memory Interface Based on SCI Signaling Technology (RamLink)," IEEE Standards Department, Draft 1.25 IEEE P1596.4-199X (May 1995) (50006DOC018413 - 529)	
	AW	Gerry Kane et al., "MIPS RISC Architecture," Prentice Hall (1995) (50006DOC018576 - 848)	
	AX	IBM, "The PowerPC Architecture: A Specification For A New Family of RISC Processors," 2nd Ed., Morgan Kaufmann Publishers, Inc., (1994) (50006DOC019229 - 767)	
	AY	Hewlett-Packard Co., "PA-RISC 1.1 Architecture and Instruction Set," Manual Part No. 09740-90039, (1990) (50006DOC018849 - 19228)	
	AZ	MIPS Computer Systems, Inc., "MIPS R4000 User's Manual," Mfg. Part No. M8-00040, (1990) (50006DOC017026 - 621)	
	BA	i860 <sup>TM</sup> Microprocessor Architecture, Neal Margulis, Foreword by Les Kohn	
	BB	Gove, "The MVP: A Highly-Integrated Video Compression Chip," IEEE Data Compression Conference, pp. 215-24 (March 1994) (51056DOC000891 - 900)	
	BC	Gove, "The Multimedia Video Processor (MVP): A Chip Architecture for Advanced DSP Applications," IEEE DSP Workshop, pp. 27-30 (October 2-5, 1994) (51056DOC015452 - 455)	
	BD	Guttag et al., "A Single-Chip Multiprocessor for Multimedia: The MVP," IEEE Computer Graphics & Applications, pp. 53-64 (November 1992) (51056DOC000913 - 924)	
	BE	Lee et al., "MediaStation 5000: Integrating Video and Audio," IEEE Multimedia pp. 50-61 (Summer 1994) (51056DOC000901 - 912)	
	BF	TMS320C80 (MVP) Parallel Processor User's Guide, Texas Instruments (March 1995) (51056DOC003744 - 4437)	
	BG	TMS320C80 (MVP) Master Processor User's Guide, Texas Instruments (March 1995) (51056DOC000925 - 957)	
	BH	Bass et al., "The PA 7100LC Microprocessor: A Case Study of IC Design Decisions in a Competitive Environment," Hewlett-Packard Journal, Vol. 46, No. 2, pp. 12-22 (April 1995) (51056DOC059283 - 289)	
	BI	Bowers et al., "Development of a Low-Cost, High Performance, Multiuser Business Server System," Hewlett-Packard Journal, Vol. 46, No. 2, p. 79 (April 1995) (51056DOC059277 - 282)	
	BJ	Gwennap, "New PA-RISC Processor Decodes MPEG Video: Hewlett-Packard's PA-7100LC Uses New Instructions to Eliminate Decoder Chip," Microprocessor Report, pp. 16-17 (January 24, 1994) (51056DOC002140 - 141)	
	BK	Gwennap, "Digital MIPS Add Multimedia Extensions," Microdesign Resources, pp. 24-28 (November 18, 1996) (51056DOC003454 - 459)	
	BL	Kurpanek et al., "PA7200: A PA-RISC Processor with Integrated High Performance MP Bus Interface," IEEE COMPCON '94, pp. 375-82 (February 28- March 4, 1994) (51056DOC002149 - 156)	
	BM	Lee et al., "Pathlength Reduction Features in the PA-RISC Architecture," IEEE COMPCON, pp. 129-35 (February 24-28, 1992) (51056DOC068161 - 167)	
	BN	Lee et al., "Real-Time Software MPEG Video Decoder on Multimedia-Enhanced PA 7100LC Processors," Hewlett-Packard Journal, Vol. 46, No. 2, pp. 60-68 (April 1995) (51056DOC013549 - 557)	

Examiner Signature		Dated Considered	
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\*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORM TO THIS ADDRESS. Send To Commissioner For Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

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			Filing Date	November 14, 2003
			First Named Inventor	Craig C. HANSEN, et al.
			Group Art Unit	2183
			Examiner Name	CHAN, EDDIE P
			Attorney Docket Number	43876-148
Sheet	3	of	10	

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		Number-Kind Code <sup>2</sup> (if known)			
	BO	US-5,636,351	06/03/1997	Lee	
	BP	US-5,721,892	02/24/1998	Peleg, et al.	
	BQ	US-5,734,874	03/31/1998	Van Hook, et al.	
	BR	US-5,758,176	05/26/1998	Agarwal, et al.	
	BS	US-5,768,546	06/16/1998	Kwon	
	BT	US-5,887,183	03/23/1999	Agarwal, et al.	
	BU	US-5,996,057	11/30/1999	Scales III, et al.	
	BV	US-6,425,073	07/23/2002	Roussel, et al.	
	BW	US-6,516,406	02/04/2003	Peleg, et al.	

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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

Examiner Signature		Date Considered	
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<b>Sheet</b>	4	of	10	<b>Attorney Docket Number</b>	43876-148

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	BX	Lee, "Realtime MPEG Video via Software Decompression on a PA-RISC Processor," IEEE, pp. 186-92 (1995) (51056DOC007345 - 351)	
	BY	Martin, "An Integrated Graphics Accelerator for a Low-Cost Multimedia Workstation," Hewlett-Packard Journal, Vol. 46, No. 2, pp. 43-50 (April 1995) (51056DOC072083 - 090)	
	BZ	Undy et al., "A Low-Cost Graphics and Multimedia Workstation Chip Set," IEEE Micro, pp. 10-22 (April 1994) (51056DOC002578 - 590)	
	CA	HP 9000 Series 700 Workstations Technical Reference Manual: Model 712, Hewlett-Packard (January 1994) (51056DOC068048 - 141)	
	CB	PA-RISC 1.1 Architecture and Instruction Set Reference Manual, Third Edition, Hewlett-Packard (February 1994) (51056DOC002157 - 176)	
	CC	Ang, "StarT Next Generation: Integrating Global Caches and Dataflow Architecture," Proceedings of the ISCA 1992 Dataflow Workshop (1992) (51056DOC071743 - 776)	
	CD	Beckerle, "Overview of the StarT (*T) Multithreaded Computer," IEEE COMPCON '93, pp. 148-56 (February 22-26, 1993) (51056DOC002511 - 519)	
	CE	Diefendorff et al., "The Motorola 88110 Superscalar RISC Microprocessor," IEEE pp. 157-62 (1992) (51056DOC008746 - 751)	
	CF	Gipper, "Designing Systems for Flexibility, Functionality, and Performance with the 88110 Symmetric Superscalar Microprocessor," IEEE (1992) (51056DOC008758 - 763)	
	CG	Nikhil et al., "T: A Multithreaded Massively Parallel Architecture," Computation Structures Group Memo 325-2, Laboratory for Computer Science, Massachusetts Institute of Technology (March 5, 1992) (51056DOC002464 - 476)	
	CH	Papadopoulos et al., "T: Integrated Building Blocks for Parallel Computing," ACM, pp. 624-35 (1993) (51056DOC007278 - 289)	
	CI	Patterson, "Motorola Announces First High Performance Single Board Computer Using Superscalar Chip," Motorola Computer Group (Sept. 1992) (51056DOC069260 - 262)	
	CJ	M. Phillip, "Performance Issues for 88110 RISC Microprocessor," IEEE, 1992 (51056DOC008752 - 757)	
	CK	M. Smotherman et al., "Instruction Scheduling for the Motorola 88110," IEEE, 1993 (51056DOC008784 - 789)	
	CL	R. Mueller, "The MC88110 Instruction Sequencer," Northcon, 1992 (51056DOC009735 - 738)	
	CM	J. Arends, "88110: Memory System and Bus Interface," Northcon, 1992 (51056DOC009739 - 742)	
	CN	K. Pepe, "The MC88110's High Performance Load/Store Unit," Northcon, 1992 (51056DOC009743 - 747)	
	CO	J. Maguire, "MC88110: Datpath," Northcon, 1992 (51056DOC010059 - 063)	
	CP	Abel et al., "Extensions to FORTRAN for Array Processing," ILLIAC IV Document No. 235, Department of Computer Science, University of Illinois at Urbana-Champaign (September 1, 1970) (51056DOC001630 - 646)	
	CQ	Barnes et al., "The ILLIAC IV Computer," IEEE Transactions on Computers, Vol. C-17, No. 8, pp. 746-57 (August 1968) (51056DOC012650 - 661)	
	CR	Knapp et al., "Bulk Storage Applications in the ILLIAC IV System," ILLIAC IV Document No. 250, Center for Advanced Computation, University of Illinois at Urbana-Champaign (August 3, 1971) (51056DOC001647 - 656)	
	CS	Awaga et al., "The $\mu$ VP 64-bit Vector Coprocessor: A New Implementation of High-Performance Numerical Computation," IEEE Micro, Vol. 13, No. 5, pp. 24-36 (October 1993) (51056DOC011921 - 934)	
	CT	Takahashi et al., "A 289 MFLOPS Single Chip Vector Processing Unit," The Institute of Electronics, Information, and Communication Engineers Technical Research Report, pp. 17-22 (May 28, 1992) (51056DOC009798 - 812)	

<b>Examiner Signature</b>		<b>Dated Considered</b>	
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Sheet	5	of	10	Attorney Docket Number	43876-148
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	CU	Uchiyama et al., "The Gmicro/500 Superscalar Microprocessor with Branch Buffers," IEEE Micro (October 1993) (51056DOC000185 - 194)			
	CV	Broughton et al., "The S-1 Project: Top-End Computer Systems for National Security Applications," (October 24, 1985) (51056DOC057368 - 607)			
	CW	Farmwald et al., "Signal Processing Aspects of the S-1 Multiprocessor Project," SPIE Vol. 241, Real-Time Signal Processing (1980) (51056DOC072280 - 291)			
	CX	Farmwald, "High Bandwidth Evaluation of Elementary Functions," IEEE Proceedings, 5th Symposium on Computer Arithmetic (1981) (51056DOC071029 - 034)			
	CY	Gilbert, "An Investigation of the Partitioning of Algorithms Across an MIMD Computing System," (February 1980) (51056DOC072244 - 279)			
	CZ	Widdoes, "The S-1 Project: Developing High-Performance Digital Computers," IEEE Computer Society COMPCON Spring 1980 (December 11, 1979) (51056DOC071574 - 585)			
	DA	Cornell, S-1 Uniprocessor Architecture SMA-4 (51056DOC056505 - 895)			
	DB	The S-1 Project, January 1985, S-1 Technical Staff (51056DOC057368 - 607)			
	DC	S-1 Architecture and Assembler SMA-4 Manual, December 19, 1979 (Preliminary Version) (51056DOC057608 - 918)			
	DD	Michielse, "Performing the Convex Exemplar Series SPP System," Proceedings of Parallel Scientific Computing, First Intl Workshop, PARA '94, pp. 375-82 (June 20-23, 1994) (51056DOC020754 - 758)			
	DE	Wadleigh et al., "High Performance FFT Algorithms for the Convex C4/XA Supercomputer," Poster, Conference on Supercomputing, Washington, D.C. (November 1994) (51056DOC068618)			
	DF	C4 Technical Overview (September 23, 1993) (51056DOC017111 - 157)			
	DG	Saturn Assembly Level Performance Tuning Guide (January 1, 1994) (51056DOC017369 - 376)			
	DH	Saturn Differences from C Series (February 6, 1994) (51056DOC017150 - 157)			
	DI	"Convex Adds GaAs System," Electronic News (June 20, 1994) (51056DOC019388 - 390)			
	DJ	Convex Architecture Reference Manual, Sixth Edition (1992) (51056DOC016599 - 993)			
	DK	Convex Assembly Language Reference Manual, First Edition (December 1991) (51056DOC015996 - 6598)			
	DL	Convex Data Sheet C4/XA Systems, Convex Computer Corporation (51056DOC059235 - 236)			
	DM	Saturn Overview (November 12, 1993) (51056DOC017111 - 157)			
	DN	Convex Notebook containing various "Machine Descriptions" (51056DOC016994 - 7510)			
	DO	"Convex C4/XA Offer 1 GFLOPS from GaAs Uniprocessor," Computergram International, June 15, 1994 (51056DOC019383)			
	DP	Excerpt from Convex C4600 Assembly Language Manual, 1995 (51056DOC061441 - 443)			
	DQ	Excerpt from "Advanced Computer Architectures - A Design Space Approach," Chapter 14.8, "The Convex C4/XA System" (51056DOC061453 - 459)			
	DR	Convex C4600 Assembly Language Manual, First Edition, May 1995 (51056DOC064728 - 5299)			
	DS	Alvarez et al., "A 450MHz PowerPC Microprocessor with Enhanced Instruction Set and Copper Interconnect," ISSCC (February 1999) (51056DOC071393 - 394)			

Examiner Signature		Dated Considered	
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Substitute for form 1449A/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Application Number	10/712 430
				Filing Date	November 14, 2003
				First Named Inventor	Craig C. HANSEN, et al.
				Group Art Unit	2183
				Examiner Name	CHAN, EDDIE P
Sheet	6	of	10	Attorney Docket Number	43876-148

**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T <sup>2</sup>
	DT	Tyler et al., "AltiVec™: Bringing Vector Technology to the PowerPC™ Processor Family," IEEE (February 1999) (51056DOC071035 - 042)	
	DU	AltiVec™ Technology Programming Environments Manual (1998) (51056DOC071043 - 392)	
	DV	Atkins, "Performance and the i860 Microprocessor," IEEE Micro, pp. 24-27, 72-78 (October 1991) (5156DOC070655 - 666)	
	DW	Grimes et al., "A New Processor with 3-D Graphics Capabilities," NCGA '89 Conference Proceedings Vol. 1, pp. 275-84 (April 17-20, 1989) (5156DOC070711 - 717)	
	DX	Grimes et al., "The Intel i860 64-Bit Processor: A General-Purpose CPU with 3D Graphics Capabilities," IEEE Computer Graphics & Applications, pp. 85-94 (July 1989) (5156DOC070701 - 710)	
	DY	Kohn et al., "A 1,000,000 Transistor Microprocessor," 1989 IEEE International Solid-State Circuits Conference Digest of Technical Papers, pp. 54-55, 290 (February 15, 1989) (51056DOC072091 - 094)	
	DZ	Kohn et al., "A New Microprocessor with Vector Processing Capabilities," Electro/89 Conference Record, pp. 1-6 (April 11-13, 1989) (5156DOC070672 - 678)	
	EA	Kohn et al., "Introducing the Intel i860 64-Bit Microprocessor," IEEE Micro, pp. 15-30 (August 1989) (5156DOC070627 - 642)	
	EB	Kohn et al., "The i860 64-Bit Supercomputing Microprocessor," AMC, pp. 450-56 (1989) (51056DOC000330 - 336)	
	EC	Margulis, "i860 Microprocessor Architecture," Intel Corporation (1990) (51056DOC066610 - 7265 and 5156DOC069971 - 70626)	
	ED	Mittal et al., "MMX Technology Architecture Overview," Intel Technology Journal Q3 '97, pp. 1-12 (1997) (5156DOC070689 - 700)	
	EE	Patel et al., "Architectural Features of the i860 - Microprocessor RISC Core and On-Chip Caches," IEEE, pp. 385-90 (1989) (5156DOC070679 - 684)	
	EF	Rhodehamel, "The Bus Interface and Paging Units of the i860 Microprocessor," IEEE, pp. 380-84 (1989) (5156DOC070643 - 647)	
	EG	Perry, "Intel's Secret is Out," IEEE Spectrum, pp. 22-28 (April 1989) (5156DOC070648 - 654)	
	EH	Sit et al., "An 80 MFLOPS Floating-Point Engine in the Intel i860 Processor," IEEE, pp. 374-79 (1989) (51056DOC072095 - 101)	
	EI	i860 XP Microprocessor Data Book, Intel Corporation (May 1991) (51056DOC067266 - 427)	
	EJ	Paragon User's Guide, Intel Corporation (October 1993) (51056DOC068802 - 9097)	
	EK	N15 Micro Architecture Specification, dated April 29, 1991 (50781DOC000001 - 982)	
	EL	N15 External Architecture Specification, dated October 17, 1990 (51056DOC017511 - 551)	
	EM	N15 External Architecture Specification, dated December 14, 1990 (50781DOC001442 - 509)	
	EN	N15 Product Requirements Document, dated December 21, 1990 (50781DOC001420 - 441)	
	EO	N15 Product Implementation Plan, dated December 21, 1990 (50781DOC001794 - 851)	
	EP	N12 Performance Analysis document version 2.0, dated September 21, 1990 (51056DOC072992 - 73027)	
	EQ	Hansen, "Architecture of a Broadband MediaProcessor," IEEE COMPCON 96 (February 25-29, 1996) (MU0013276 - 283 and 51057DOC001825 - 831)	
	ER	Moussouris et al., "Architecture of a Broadband MediaProcessor," Microprocessor Forum (1995) (MU0048611 - 630)	

Examiner Signature		Dated Considered	
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Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/712,430
				Filing Date	November 14, 2003
				First Named Inventor	Craig C. HANSEN, et al.
				Group Art Unit	2183
				Examiner Name	CHAN, EDDIE P
Sheet	7	of	10	Attorney Docket Number	43876-148

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL-LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T <sup>2</sup>
	ES	Arnould et al., "The Design of Nectar: A Network Backplane for Heterogeneous Multicomputers," ACM (1989) (51056DOC020947 - 958)	
	ET	Bell, "Ultracomputers: A Teraflop Before Its Time," Communications of the ACM, (August 1992) pp. 27-47 (51056DOC020903 - 923)	
	EU	Broomell et al., "Classification Categories and Historical Development of Circuit Switching Topologies," Computing Surveys, Vol. 15, No. 2, pp 95-133 (June 1983) (51056DOC003002 - 040)	
	EV	Culler et al., "Analysis of Multithreaded Microprocessors Under Multiprogramming," Report No. UCB/CSD 92/687 (May 1992) (51056DOC069283 - 300)	
	EW	Donovan et al., "Pixel Processing in a Memory Controller," IEEE Computer Graphics and Applications, pp. 51-61 (January 1995) (51056DOC059635 - 645)	
	EX	Fields, "Hunting for Wasted Computing Power: New Software for Computing Networks Puts Idle PC's to Work," Univ. of Wisconsin-Madison, <a href="http://www.cs.wisc.edu/condor/doc/WiscIdea.html">http://www.cs.wisc.edu/condor/doc/WiscIdea.html</a> (1993) (51056DOC068704 - 711)	
	EY	Geist, "Cluster Computing: The Wave of the Future?," Oak Ridge National Laboratory, 84OR21400 (May 30, 1994) (51056DOC020924 - 929)	
	EZ	Ghafoor, "Systolic Architecture for Finite Field Exponentiation," IEEE Proceedings, Vol. 136 (November 1989) (51056DOC071700 - 705)	
	FA	Giloi, "Parallel Programming Models and their Interdependence with Parallel Architectures," IEEE Proceedings (September 1993) (51056DOC071792 - 801)	
	FB	Hwang et al., "Parallel Processing for Supercomputers and Artificial Intelligence," (1993) (51056DOC059663 - 673)	
	FC	Hwang, "Advanced Computer Architecture: Parallelism, Scalability, Programmability," (1993) (51056DOC059656 - 662)	
	FD	Hwang, "Computer Architecture and Parallel Processing," McGraw Hill (1984) (51056DOC070166 - 1028)	
	FE	Iwaki, "Architecture of a High Speed Reed-Solomon Decoder," IEEE Consumer Electronics (January 1994) (51056DOC071687 - 694)	
	FF	Jain et al., "Square-Root, Reciprocal, SINE/COSINE, ARCTANGENT Cell for Signal and Image Processing," IEEE ICASSP '94, pp. II-521 - II-524 (April 1994) (51056DOC003070 - 073)	
	FG	Laudon et al., "Architectural and Implementation Tradeoffs in the Design of Multiple-Context Processors," Technical Report: CSL-TR-92-523 (May 1992) (51056DOC069301 - 327)	
	FH	Lawrie, "Access and Alignment of Data in an Array Processor," IEEE Transactions on Computers, Vol. C-24, No. 12, pp. 99-109 (December 1975) (51056DOC002932 - 942)	
	FI	Le-Ngoc, "A Gate-Array-Based Programmable Reed-Solomon Codec: Structure-Implementation-Applications," IEEE Military Communications (1990) (51056DOC071695 - 699)	
	FJ	Litzkow et al., "Condor - A Hunter of Idle Workstations," IEEE (1988) (51056DOC068712 - 719)	
	FK	Markstein, "Computation of Elementary Functions on the IBM RISC System/6000 Processor," IBM J. Res. Develop., Vol. 34, No. 1, pp 111-19 (January 1990) (51056DOC059620 - 628)	
	FL	Nienhaus, "A Fast Square Rooter Combining Algorithmic and Table Lookup Techniques," IEEE Proceedings Southeastcon, pp. 1103-05 (1989) (51056DOC061469 - 471)	
	FM	Renwick, "Building a Practical HIPPI LAN," IEEE, pp. 355-60 (1992) (51056DOC020937 - 942)	

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				Application Number	10/712,430
				Filing Date	November 14, 2003
				First Named Inventor	Craig C. HANSEN, et al.
				Group Art Unit	2183
				Examiner Name	CHAN, EDDIE P
Sheet	8	of	10	Attorney Docket Number	43876-148

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Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS); title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T <sup>2</sup>
	FN	Rohrbacher et al., "Image Processing with the Staran Parallel Computer," IEEE Computer, Vol. 10, No. 8, pp. 54-59 (August 1977) (reprinted version pp. 119-124) (51056DOC002943 - 948)	
	FO	Ryne, "Advanced Computers and Simulation," IEEE, pp. 3229-33 (1993) (51056DOC020883 - 887)	
	FP	Siegel, "Interconnection Networks for SIMD Machines," IEEE Computer, Vol. 12, No. 6 (June 1979) (reprinted version pp. 110 118) (51056DOC002949 - 957)	
	FQ	Singh et al., "A Programmable HIPPI Interface for a Graphics Supercomputer," ACM (1993) (51056DOC020888 - 896)	
	FR	Smith, "Cache Memories," Computing Surveys, Vol. 14, No. 3 (September 1982) (51056DOC071586 - 643)	
	FS	Tenbrink et al., "HIPPI: The First Standard for High-Performance Networking," Los Alamos Science (1994) (51056DOC020943 - 946)	
	FT	Tolmie, "Gigabit LAN Issues: HIPPI, Fibre Channel, or ATM," Los Alamos National Laboratory Report No. LA-UR 94-3994 (1994) (51056DOC046599 - 609)	
	FU	Tolmie, "HIPPI: It's Not Just for Supercomputers Anymore," Data Communications (May 8, 1995) (51056DOC071802 - 809)	
	FV	Toyokura et al., "A Video DSP with a Macroblock-Level-Pipeline and a SIMD Type Vector-Pipelined Architecture for MPEG2 CODEC," ISSCC94, Section 4, Video and Communications Signal Processors, Paper WP 4.5, pp. 74-75 (1994) (51056DOC003659 - 660)	
	FW	Tullsen et al., "Simultaneous Multithreading: Maximizing On-Chip Parallelism," Proceedings of the 22nd Annual International Symposium on Computer Architecture (June 1995) (51056DOC071434 - 443)	
	FX	Turcotte, "A Survey of Software Environments for Exploiting Networked Computing Resources," Engineering Research Center for Computational Field Simulation (June 11, 1993) (51056DOC069098 - 256)	
	FY	Vetter et al., "Network Supercomputing: Connecting Cray Supercomputers with a HIPPI Network Provides Impressively High Execution Rates," IEEE Network (May 1992) (51056DOC020930 - 936)	
	FZ	Wang, "Bit-Level Systolic Array for Fast Exponentiation in GF(2m)," IEEE Transactions on Computers, Vol. 43, No. 7, pp. 838-41 (July 1994) (51056DOC059407 - 410)	
	GA	Ware et al., "64 Bit Monolithic Floating Point Processors," IEEE Journal of Solid-State Circuits, Vol. Sc-17, No. 5 (October 1982) (51056DOC059646 - 655)	
	GB	"Bit Manipulator," IBM Technical Disclosure Bulletin, pp. 1575-76 (November 1974) (51056DOC010205 - 206)	
	GC	Finney et al., "Using a Common Barrel Shifter for Operand Normalization, Operand Alignment and Operand Unpack and Pack in Floating Point," IBM Technical Disclosure Bulletin, pp. 699-701 (July 1986) (51056DOC010207 - 209)	
	GD	Data General AViiON AV500, 550, 4500 and 5500 Servers	
	GE	Jovanovic et al., "Computational Science: Advances Through Collaboration," San Diego Supercomputer Center Science Report (1993) (51056DOC068769 - 779)	
	GF	High Performance Computing and Communications: Toward a National Information Infrastructure, National Science Foundation (NSF) (1994) (51056DOC068791 - 801)	
	GG	National Coordination Office for High Performance Computing and Communications, "High Performance Computing and Communications: Foundation for America's Information Future" (1996) (51056DOC072102 - 243)	
	GH	Wilson, "The History of the Development of Parallel Computing," <a href="http://ei.cs.vt.edu/~history/Parallel.html">http://ei.cs.vt.edu/~history/Parallel.html</a> (51056DOC068720 - 757)	

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				Filing Date	November 14, 2003
				First Named Inventor	Craig C. HANSEN, et al.
				Group Art Unit	2183
Examiner Name	CHAN, EDDIE P				
Sheet	9	of	10	Attorney Docket Number	43876-148

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	GI	IEEE Standard 754 (ANSI/IEEE Std. 754-1985) (51056DOC019304 - 323)	
		Original Complaint for Patent Infringement, <i>MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation</i> ; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed March 26, 2004	
	GJ	Amended Complaint for Patent Infringement, <i>MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation</i> ; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed April 20, 2004	
	GK	Expert Witness Report of Richard A. Killworth, Esq., <i>MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation</i> ; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed September 12, 2005	
	GL	Declaration and Expert Witness Report of Ray Mercer Regarding Written Description and Enablement Issues, <i>MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation</i> ; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed September 12, 2005	
	GM	Corrected Expert Report of Dr. Stephen B. Wicker Regarding Invalidity of U.S. Patent Nos. 5,742,840; 5,794,060; 5,764,061; 5,809,321; 6,584,482; 6,643,765; 6,725,356 and Exhibits A-I; <i>MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation</i> ; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed October 6, 2005	
	GN	Defendants Intel and Dell's Invalidity Contentions with Exhibits A-G; <i>MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation</i> ; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed September 19, 2005	
	GO	Defendants Dell Inc. and Intel Corporation's Identification of Prior Art Pursuant to 35 USC §282; <i>MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation</i> ; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division filed October 7, 2005	
	GP	Request for <i>Inter Partes</i> Reexamination Under 35 USC §§ 311-318 of U.S. Patent No. 6,725,356 filed on June 28, 2005	
	GQ	Deposition of Larry Mennemeier on September 22, 2005 and Exhibit 501; <i>MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation</i> ; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division	
	GR	Deposition of Leslie Kohn on September 22, 2005; <i>MicroUnity Systems Engineering, Inc. v. Dell, Inc. f/k/a/ Dell Computer and Intel Corporation</i> ; C.A. NO. 2-04CV-120; In the United States District Court of the Eastern District of Texas, Marshall Division	
	GS	Intel Article, "Intel Announces Record Revenue of 9.96 Billion", October 18, 2005	
	GT	The New York Times Article, "Intel Posts 5% Profit Increase on Demand for Notebook Chips", October 19, 2005	
	GU	USA Today Article, "Intel's Revenue Grew 18% In Robust Quarter for Tech", October 19, 2005	
	GV	The Wall Street Journal Article, "Intel Says Chip Demand May Slow", October 19, 2005	
	GW	The New York Times Article, "Intel Settlement Revives A Fading Chip Designer", October 20, 2005	

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INFORMATION DISCLOSURE CITATION IN AN APPLICATION				ATTY. DOCKET NO. <b>043876-0148</b>		SERIAL NO. <b>10/712,430</b>	
(PTO-1449)				APPLICANT <b>Craig HANSEN, et al.</b>			
				FILING DATE <b>November 14, 2003</b>		GROUP <b>2183</b>	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sub>2</sub> ( <i>if known</i> )	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
	A	US 6,643,765	11-04-2003	Hansen et al.			
	B	US 6,725,356	04-20-2004	Hansen et al.			
		US					
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FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Codes-Number 4-Kind Codes ( <i>if known</i> )	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation Yes No	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					
	C	MARKOFF, JOHN, "Intel Settlement Revives a Fading Chip Designer," The New York Times (10-20-2005)					
	D	Intel Press Release, "Intel Announces Record Revenue of \$9.96 Billion," Santa Clara, CA, 10-18-2005					
EXAMINER				DATE CONSIDERED			

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Docket No.: 043876-01

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of	:	Customer Number: 20277
	:	
Craig HANSEN, et al.	:	Confirmation Number: 9134
	:	
Application No.: 10/712,430	:	Group Art Unit: 2183
	:	
Filed: November 14, 2003	:	Examiner: Eddie CHAN
	:	
For: SYSTEM AND SOFTWARE FOR CATENATED GROUP SHIFT INSTRUCTION		

**NOTICE OF CONCURRENT PROCEEDINGS**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Please be advised of the following concurrent reexamination proceedings, which involve related patents to the above-identified matter:

**Control No. Patent No.**

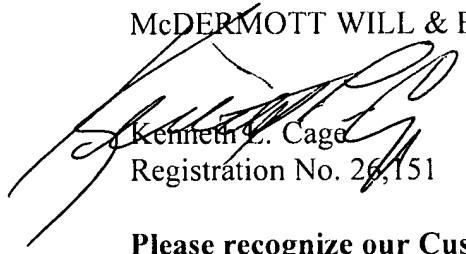
90/007,531	5,809,321
90/007,532	6,584,482
90/007,563	5,794,061
90/007,583	5,742,840
90/007,593	5,794,060
95/000,089	6,643,765
95/000,100	6,725,356
90/007,618	6,269,136
90/007,634	5,737,547

90/007,647 5,336,926

90/007,758 5,985,692

Respectfully submitted,

McDERMOTT WILL & EMERY LLP

A handwritten signature in black ink, appearing to read "Kenneth L. Cage", is written over the printed name and registration number.

Kenneth L. Cage  
Registration No. 26,151

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**Date: January 30, 2006**

**Please recognize our Customer No. 20277  
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